

REPORT ON MACHINERY

No. 1672

REC'D NEW YORK 22-1918

Received at London Office

MON 16 DEC 1918

of writing Report Nov 21 1918 When handed in at Local Office Nov 22 1918 Port of Newport News Va
 in Survey held at Newport News Va Date, First Survey Aug 23 Last Survey Nov 16 1918
 g. Book. STEEL S.S. "AGWIDALE" (Number of Visits 47)

Master ✓ Built at Newport News Va By whom built Newport News S.S. & D. Co. When built 1918-11
 Tons } Gross 5080
 Net 3678

Engines made at Newport News By whom made Newport News S.S. & D. Co. when made 1918-11
 Milers made at Newport News By whom made Newport News S.S. & D. Co. when made 1918-11

Registered Horse Power 471 Owners Atlantic Gulf & West India S.S. Co. (U.S. Shipping Board E.F. Corp.) Port belonging to Newport News

Net Horse Power as per Section 28 471 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Steam - Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 24 1/2, 41 1/2, 72 Length of Stroke 48 Revs. per minute 70 Dia. of Screw shaft 14 1/4 Material of screw shaft CHS.

Is the screw shaft fitted with a continuous liner the whole length of the stern tube yes Is the after end of the liner made water tight yes
 If the liner is in more than one length are the joints burned yes If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ✓

If two liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 60"

Dia. of Tunnel shaft 12.9 as per rule 13 Dia. of Crank shaft journals 13.5 as per rule 14 Dia. of Crank pin 14 3/8 Size of Crank webs 9 1/2 Dia. of thrust shaft under bars 14 Dia. of screw 16.9 Pitch of Screw 16.9 No. of Blades 4 State whether moveable no Total surface 92.3

No. of Feed pumps 2 Diameter of ditto 4" Stroke 21" Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 5" Stroke 21" Can one be overhauled while the other is at work yes

No. of Donkey Engines 2 Sizes of Pumps 10x12x12 - 9x6x10 No. and size of Suctions connected to both Bilge and Donkey pumps no

In Engine Room Two 3 1/2" Tunnel 1 - 3 1/2" In Holds, &c. #1 Hold: - Two 3 1/2" #2 Hold: - Two 3 1/2" #3 Hold: - Two 3 1/2" #4 Hold: - Two 3 1/2" D.T.: - Two 3 1/2"

No. of Bilge Injections 1 sizes 9" Connected to condenser to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes 3 1/2"

Are all the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible yes Are the sluices on Engine room bulkheads always accessible no

Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Valves

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates yes Are the Discharge Pipes above or below the deep water line yes

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel yes Are the Blow Off Cocks fitted with a spigot and brass covering plate yes

What pipes are carried through the bunkers none How are they protected ✓

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yes

Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from U.I.K.

OILERS, &c.—(Letter for record S.) Manufacturers of Steel LUKENS I & S Co.

Total Heating Surface of Boilers 6564 Is Forced Draft fitted yes No. and Description of Boilers Two: Scotch: S.E.

Working Pressure 190 Tested by hydraulic pressure to 285 Date of test Aug. 8th 1915 No. of Certificate 194-195

Can each boiler be worked separately yes Area of fire grate in each boiler Oil FUEL No. and Description of Safety Valves to each boiler Two: Spring: 3 1/2" Area of each valve 9.62 Pressure to which they are adjusted 190 Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 18" Mean dia. of boilers 16 1/6" Length 11.6" Material of shell plates S.

Thickness 1 3/4" Range of tensile strength 60000-76800 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams I.R.L.

long. seams I.B.S.T.R. Diameter of rivet holes in long. seams 1 9/16" Pitch of rivets 8.34 Lap of plates or width of butt straps 23"

Per centages of strength of longitudinal joint 103.6 Working pressure of shell by rules 203 Size of manhole in shell 16 x 12"

Size of compensating ring 39 x 35 No. and Description of Furnaces in each boiler 4: Morrison Material S. Outside diameter 47 3/16"

Length of plain part top 19 Thickness of plates bottom 32 Description of longitudinal joint Weld No. of strengthening rings ✓

Working pressure of furnace by the rules 200 Combustion chamber plates: Material S. Thickness: Sides 9/16" Back 5/8" Top 5/8" Bottom 7/8"

Pitch of stays to ditto: Sides 7x7 Back 7/4 x 7 Top 8x7 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 197

Material of stays S. Area at smallest part 1.47 Area supported by each stay 56 Working pressure by rules 210 End plates in steam space: Material S. Thickness 1 1/16" Pitch of stays 16 x 16 How are stays secured I.N. Working pressure by rules 197.5 Material of stays S.

Area at smallest part 2 3/4 Area supported by each stay 256 Working pressure by rules 241 Material of Front plates at bottom S.

Thickness 3/4 Material of Lower back plate S. Thickness 3/4 Greatest pitch of stays 12 1/2" Working pressure of plate by rules 280

Diameter of tubes 2 3/4 Pitch of tubes 4 x 3 3/4 Material of tube plates S. Thickness: Front 3/4 Back 3/4 Mean pitch of stays 12 x 7 1/2

Pitch across wide water spaces 12 3/4 Working pressures by rules 279 Girders to Chamber tops: Material S. Depth and thickness of girder at centre Two: 10 x 3 3/4 Length as per rule 34 Distance apart 8 1/4 x 7 1/4 Number and pitch of stays in each 4: - 7"

Working pressure by rules 210 Steam dome: description of joint to shell ✓ % of strength of joint

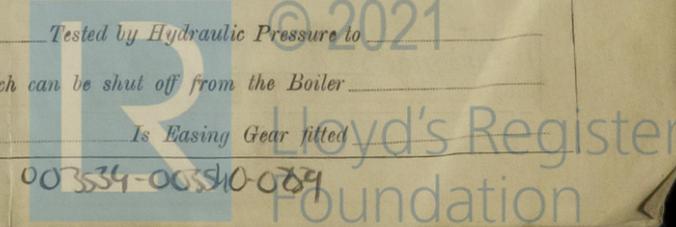
Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes

Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed

SUPERHEATER. Type ✓ Date of Approval of Plan ✓ Tested by Hydraulic Pressure to 2021

Date of Test ✓ Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler ✓

Diameter of Safety Valve ✓ Pressure to which each is adjusted ✓ Is Easing Gear fitted ✓



00334-00510-084

IS A DONKEY BOILER FITTED? *Yes*

If so, is a report now forwarded? *Yes*

SPARE GEAR. State the articles supplied:— *Exhaust stops, Valve rods, Top and bottom end brackets and bolts, Main bearing bolts, Side coupling bolts & Piston rings, & Check valves & cocks complete for main boilers, Feed pipes & air pump valve, Piston tubes, Condenser tubes, Nuts, bolts & more of various sizes*

The foregoing is a correct description,

Newport News Shipbuilding & Dry Dock Co.,

By

S. L. Wood

Manufacturer.

Assistant to the President.

Dates of Survey while building: During progress of work in shops -- *J. 23. F. 14. M. 8. 9. 26. A. 9. 23. M. 13. 17. 22. 24. 27. 31. J. 5. 14. 19. 24. 27. J. 10. 11. 16. 22. 27.*
During erection on board vessel --- *A. 8. 10. 13. 15. 24. S. 5. 16. 18. 21. 27. O. 4. 8. 9. 18. 16. 21.*
Total No. of visits *47*

Is the approved plan of main boiler forwarded herewith *Yes*

" " " donkey " " " *Yes*

Dates of Examination of principal parts—Cylinders *M. 27. J. 19* Slides *J. 10* Covers *S. 5. 18* Pistons *O. 16* Rods *S. 5. 18*
Connecting rods *O. 4* Crank shaft *O. 18* Thrust shaft *O. 18* Tunnel shafts *A. 24* Screw shaft *A. 24* Propeller *N. 1*
Stern tube *A. 13* Steam pipes tested *O. 30. N. 2* Engine and boiler seatings *O. 4* Engines holding down bolts *N. 9*
Completion of pumping arrangements *N. 13. 14. 15* Boilers fixed *N. 9* Engines tried under steam *N. 9*
Completion of fitting sea connections *SEP 5th* Stern tube *SEP 5th* Screw shaft and propeller *Nov. 1.*
Main boiler safety valves adjusted *N. 9th* Thickness of adjusting washers *LOCK NUTS-*

Material of Crank shaft *O.H.S.* Identification Mark on Do. *M. 18. 10. 18* Material of Thrust shaft *O.H.S.* Identification Mark on Do. *M. 18*

Material of Tunnel shafts *O.H.S.* Identification Marks on Do. *SEP 24. 8. 18* Material of Screw shafts *O.H.S.* Identification Marks on Do. *SEP 24*

Material of Steam Pipes *COPPER & STEEL* Test pressure *400 lbs. & 600 lbs.*

Is an installation fitted for burning oil fuel *Yes* Is the flash point of the oil to be used over 150°F. *Yes*

Have the requirements of Section 49 of the Rules been complied with *Yes*

Is this machinery duplicate of a previous case *Yes* If so, state name of vessel *"MININDIES" & "MINAIRES"*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery has been built under special survey in accordance with the approved plans and Rules for the record of L.M.C.*

The workmanship and materials are good and the engines work well, rendering the vessel eligible, in my opinion, to have the record of L.M.C. 11.18 M.B. 190th. I.B. 130-131. "Fitted for oil fuel F.T. above 150°F."

The furnaces of Main boilers burn oil fuel - The oil is carried in the double bottom and side bunker tanks; supplied by special fuel pump in stowage to the furnaces, and is atomized by mechanical burners.

The requirements of Sec. 49 of the Rules have been complied with.

The amount of Entry Fee ... *\$ 15.00* When applied for, *19. 11. 18*
Special ... *\$ 218.00*
Donkey Boiler Fee ... *£* When received, *22. 11. 18*
Travelling Expenses (if any) *£*

Wm. H. Depressden
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *Nov York NOV 26 1918*

Assigned *+ L.M.C. 11. 18*
Fitted for oil fuel 11.18 F. P. above 150°F

MACHINERY CERTIFICATE WRITTEN, *16. 12. 18*

